

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

M.S.

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/032,305	02/27/98	HENNHOFER	H HENNHOFER-ET
		IM22/0612	EXAMINER
			KUNEMUND, R
		ART UNIT	PAPER NUMBER
		1765	i
<b>DATE MAILED:</b> 06/12/00			

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No. <b>09/032,305</b>	Applicant(s) <b>Hennofer et al</b>	
	Examiner <b>Robert Kunemund</b>	Group Art Unit <b>1765</b>	

Responsive to communication(s) filed on applicants' argument of April 4, 2000

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

#### Disposition of Claims

Claim(s) 1, 3-7, and 9-13 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1, 3-7, and 9-13 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

#### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1765

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 3 to 7, and 9 to 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lampert et al in view of Hayashida et al.

The Lampert et al reference teaches a method of polishing and oxidizing a silicon wafer. A silicon wafer is first polished by standard polishing techniques. Then a different aqueous solution is applied to the wafer. The solution contains an oxidization agent and alkali compound, note col. 2. The sole difference between the instant claims and the prior art is the specific compounds. However, the Hayashi et al reference teaches the claimed alkali compounds used on silicon substrates, the compounds can be organic and inorganic. It would have been obvious to one of ordinary skill in the art to modify the Lampert et al reference by the teachings of

Art Unit: 1765

the Hayashi et al reference to use specific compounds in order to prevent the introduction of impurities onto the cleaned substrate.

*Response to Applicants' Arguments*

Applicant's arguments filed April 4, 2000 have been fully considered but they are not persuasive.

Applicants' argument concerning the Lampert reference is not deemed persuasive. The reference teaches the oxidization process to be done in the polishing machine. This is done according to the reference after completion of the polishing step. The instant specification states "immediately", however, gives no guidance or example as to what the inventors considered this to be. Thus, one of ordinary skill in the art must determine the range of applicants immediately. It is clear that since the reference as no intervening steps or stores the wafer, the oxidization is done in such a manner to be within applicants' immediately.

Applicant's argument concerning example 1 of Lampert is noted. However, the argument is based on two separate steps which are different, that is why the acid is used in one step. In any event the reference does teach the use of the claimed compounds as oxidization agents in other part so f the reference and these teachings cannot simply be ignored.

Applicant's argument concerning the storage step and rinsing step has been considered and not deemed persuasive. Applicant in the original specification admit that these two steps are

Application/Control Number: 09/032,305

Art Unit: 1765

conventional and well known to one of ordinary skill in the art and thus cannot be relied on for patentability.

Applicants' argument concerning the Hayashi et al reference is noted. However, the reference states that the alkali compounds can be either organic or inorganic, note, col. 4 line 5-7. Applicants are trying to limit the teachings of this reference merely to the organic compounds. However, there are other teachings of the references, and the reference does in the cite above teach compound that are within those claimed. The reference is relied on to show these compounds are well known and obvious to one of ordinary skill in the art to modify the Lampert reference.

Applicant's argument concerning the showing of the table 1 on page 8 is noted. However, the showing is not over the closest prior art of record, Lampert. The showing is non treated stored wafers versus treated stored wafers. The Lampert teaches to oxidize prior to any further step after polishing. Thus, the showing is clearly not over the closest prior art and not persuasive.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

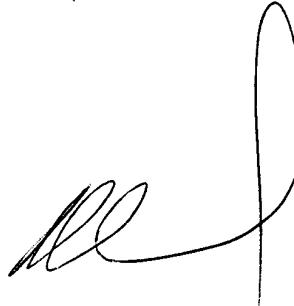
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Kunemund whose telephone number is (703) 308-1091. The examiner can normally be reached on Monday through Friday from 7:00 to 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ben Utech, can be reached on (703) 308-3836. The fax phone number for this Group is (703) 305-6357.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.



RMK

June 8, 2000

ROBERT KUNEMUND  
PRIMARY PATENT EXAMINER  
A.U. 117